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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,050	06/26/2001	Harold Kutz	CYPR-CD00199	4196

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EXAMINER

MASON, DONNA K

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 01/15/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,050

Applicant(s)

KUTZ ET AL.

Examiner

Donna K. Mason

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 18 (see Fig. 1). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "an isolation resistor 546" as described in the specification (see page 9, line 21). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

On page 2, line 14, insert the U.S. Patent Application serial number for the Kutz, et al. application entitled, "Multiple Use of Microcontroller Pad."

Appropriate correction is required. See 37 CFR 1.71.

Claim Objections

4. Claim 1 is objected to because of the following informalities:

On line 4, insert --and-- after "a processor;" Appropriate correction is required.

See 37 CFR 1.75.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Regarding independent claim 1, the phrase "at least one of an analog circuit and a digital circuit" renders the claim indefinite because it is unclear whether applicant intends to claim a circuit comprising at least one analog circuit and at least one digital circuit, or if applicant intends to claim at least one analog circuit or at least one digital circuit. (It should be noted that for examination purposes, claim 1 has been interpreted such that the circuit includes at least one analog circuit or at least one digital circuit.)

8. Claims 2-6 recite the limitation "The apparatus" in line 1 of each claim. There is insufficient antecedent basis for this limitation in the claims. It is recommended that applicant review each of claims 7-22 for recitation of the limitation "The apparatus" and make changes, where appropriate, to be consistent with any changes made to claims 2-6.

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9. It is recommended that applicant review claim 20 with regard to the recitation of “the digital output” in line 2 and “the digital input” in line 3. Does applicant intend for claim 20 to read “wherein the *digital output* is switched by an input to the multiple input logic gate” in line 3?

10. Dependent claims 7-22 inherit the indefiniteness of claims 1-6.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 3, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,188,241 to Gauthier, et al. (“Gauthier”).

With regard to independent claim 1, Gauthier discloses a microcontroller (Fig. 2, item 20) including a circuit that includes at least one analog circuit or at least one digital circuit (Fig. 3, item 48), a wirebond pad (Fig. 2, item 34 and column 1, lines 32-36), a processor (Fig. 2, item 22), a switching circuit (Fig. 2, item 24 and column 6, lines 66-67) that selectively connects the circuit to the wirebond pad under control of the processor (column 5, lines 4-5).

With regard to dependent claim 3, Gauthier discloses the microcontroller where the digital circuit includes a configurable digital circuit block (column 3, lines 11-14).

With regard to dependent claim 5, Gauthier discloses the microcontroller where the digital circuit includes a digital input and a digital output and where the switching circuit selectively connects one of the digital input or the digital output to the wirebond pad under the control of the processor (column 3, lines 28-33 and column 5, lines 4-5).

Therefore, Gauthier reads on the invention as claimed.

13. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,246,258 to Lesea.

With regard to claim 1, Lesea discloses a microcontroller, including a circuit having at least one analog circuit or at least one digital circuit, a wirebond pad (Fig. 5, item 119), a processor (Fig. 6, item 301), and a switching circuit (Fig. 5, items 216 and 217) that selectively connects the circuit to the wirebond pad under control of the processor.

With regard to claims 2-6, Lesea discloses the microcontroller where the analog circuit is a configurable analog circuit block and the digital circuit is a configurable digital circuit block (column 7, lines 46-63). Furthermore, the analog circuit includes an analog input and an analog output, and the switching circuit selectively connects one of the analog input and the analog output to the wirebond pad under control of the processor (Fig. 5). Likewise, the digital circuit includes a digital input and a digital output where the switching circuit selectively connects one of the digital input and the digital output to

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the wirebond pad under control of the processor (Fig. 5). The switching circuit also selectively connects at least one of the analog input, the analog output, the digital input and the digital output to the wirebond pad under control of the processor.

With regard to claims 7-22, Lesea disclose the microcontroller where the switching circuit includes a tristate analog buffer amplifier (Fig. 5, item 212) in series with an analog switch (Fig. 5, item 212 in series with items 216 and 217), and where the analog output is coupled to the wirebond pad and where the analog input is coupled to the wirebond pad. The switching circuit also includes a tristate analog buffer amplifier coupling the analog output to the wirebond pad and a tristate logic gate coupling the digital output to the wirebond pad (Fig. 5).

Therefore, Lesea reads on the invention as claimed.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dabral, et al. ("Dabral") in view of *Wirebonding: Reinventing the Process for MCMs* by H.K. Charles, Jr., et al. ("Charles").

With regard to claim 1, Dabral discloses a microcontroller, including a circuit including at least one of an analog circuit or at least one of a digital circuit (Fig. 1a, item

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120), a pad (Fig. 1a, see output of item 112 to bus 111), a processor (Fig. 1a, items 110 and 120, and column 4, lines 3-6), and a switching circuit (Fig. 1a, item 112).

With regard to claims 2 and 4, Dabral discloses the microcontroller where the analog circuit is a configurable analog circuit block (Fig. 1a, item 113) and where the analog circuit includes an analog input and an analog output, where the switching circuit selectively connects one of the analog input and the analog output to the pad under control of the processor (Fig. 1a).

Dabral does not expressly disclose a wirebond pad, as recited in independent claim 1. Charles discloses the use of wirebonding. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the wirebonding of Charles with the pad of Dabral. The suggestion or motivation for doing so would have been to increase quality and reliability of the pads (page 300, paragraph 1, lines 5-8).

Therefore, it would have been obvious to combine Charles with Dabral to obtain the invention as specified in claims 1, 2, and 4.

Conclusion

16. A shortened statutory period for reply is set to expire THREE MONTHS from the mailing date of this communication. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this communication.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donna K. Mason whose telephone number is (703) 305-1887. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H. Rinehart can be reached on (703) 305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

DKM


XUAN M. THAI
PRIMARY EXAMINER
TC 2100